

INUVIK AND THE ROLE OF THE
INUVIK RESEARCH LABORATORY

by

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Inuvik Research Laboratory, Inuvik, N.W.T.

Inuvik is the administrative centre for the Mackenzie Delta area. Although new and located north of the Arctic Circle, it is a fully modern settlement with all the facilities and services found elsewhere in Canada. The Inuvik Research Laboratory has been operated by the Federal Government since 1963 as a service facility supporting research and technical programmes in the western Arctic.

A CANADIAN DEVELOPMENT IN MODERN ARCTIC LIVING

"This was the first community north of the Arctic Circle built to provide the normal facilities of a Canadian town. It was designed not only as a base for development and administration but as a centre to bring education, medical care and new opportunity to the people of the Western Arctic" - June 21, 1961 (engraved on Inuvik's official opening monument).

Although Alexander Mackenzie paddled by the site of Inuvik in 1789, the area was seldom visited until 1954 when a decision was made to relocate and enlarge the school, hospital, airport and administration facilities of Aklavik. After an extensive reconnaissance of the entire delta area for a townsite, an engineering team recommended a location on the East Channel of the Mackenzie River and designated it "East Three". Then, in a frenzy of activity, the world's first truly modern Arctic town emerged from a

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construction period lasting from 1955 to 1961.

Inuvik, which in Eskimo means "The Place of Man", is now the focal point for all people living in the western Canadian Arctic. One hundred kilometres (60 miles) to the north is the Arctic Ocean, and 200 km (125 miles) to the south is the Arctic Circle. To the west, across the labyrinth of channels and islands of the Mackenzie River Delta, are the rugged Richardson Mountains, while the rolling barren grounds stretch eastward to the Precambrian Shield.

By air, Inuvik is 725 km (450 miles) from Fairbanks, 1,100 km (675 miles) from Yellowknife, 1,925 km (1,200 miles) from Edmonton and 2,100 km (1,300 miles) from Churchill. On the world air map, Inuvik is centrally located between New York and Tokyo, Los Angeles and Moscow, Honolulu and London.

Lying within the northernmost reaches of the tree line, Inuvik has a combined arctic and subarctic environment. The summers are short and warm, and the long, cold winters generally extend from mid-September through mid-May. The average temperature in July is around 18°C (65°F), although temperatures as high as 31.6°C (89°F) have been recorded at Inuvik Airport. The lowest temperature on record is -56.6°C (-70°F), but since the air is dry and there is little wind at the low temperatures, the winters are not unpleasant. Beneath Inuvik the soils are frozen to a depth of 300 metres (1,000 feet), and the presence of 'permafrost' is the reason for the piles beneath most buildings.

In January 1971, Inuvik recorded a population of 3,500 people. This figure includes 1,300 in the East End (federal housing and private), 1,300 in the West End, 500 in the school hostels, and 400 in the central, institutional and commercial areas. Of the total population, approximately 30% have Eskimo status and 10% have Indian status.

A large powerhouse by the river provides the heating and electrical requirements for Inuvik, with an above-ground, metal-clad 'utilidor' system carrying water, sewers and heating pipe throughout the serviced area.

Retail stores in Inuvik stock the same merchandise as one would find in stores of any other town of comparable size in Canada. Inuvik has three fully-licensed hotels, restaurants, movie theatre, public library, weekly newspaper, taxi service, hockey arena, curling rink, Canadian Legion Hall and a liquor store. The R.C.M.P. headquarters for the Mackenzie Delta region is also located in Inuvik. The C.B.C. operates a 1,000-watt radio station (C.H.A.K.) and also a television station. Complete local and long distance telephone service is provided by Canadian National Telecommunications. The Inuvik General Hospital is a 100-bed facility, complete with operating rooms, drug dispensary, dental and public health services.

Inuvik's modern primary school, named after the famous explorer Sir Alexander Mackenzie, has an enrolment of 750 students, while the new 20-classroom Samuel Hearne High School, opened in 1968, has an enrolment of 450 students.

A 1,800 metre (6,000 ft) all-weather landing strip is operated by the Ministry of Transport and several charter airplane and helicopter services are located in Inuvik. Pacific Western Airlines operates daily flights out of Edmonton to Inuvik, with services to intermediate points. International Jet Air operates five flights a week from Inuvik to Whitehorse. Northward Airlines connects twice a week to Whitehorse, via Old Crow and Dawson, and once a week to Sachs Harbour via Tuktoyaktuk. There are also daily flights from Inuvik to most of the delta communities.

THE INUVIK RESEARCH LABORATORY AND ASSOCIATED RESEARCH ACTIVITY

Inuvik is ideally situated for field research activities in a wide variety of disciplines. The town's position near the northern limit of tree growth has made it home for both Eskimos and Indians, and several socially-oriented projects have been carried out in the delta area. Its situation on the Mackenzie has made Inuvik a focal point for studies in the Richardson Mountains and sedimentary basins of the Cordillera to the west, the Precambrian Shield to the east, the delta and coastlands of the Arctic Ocean to the north, and the Mackenzie Valley to the south. Myriads of fresh-water lakes and streams yield varying environments for some investigators, while permafrost and its inherent construction problems have occupied other researchers. The land under Inuvik is instrumented by the Division of Building Research, National Research Council of Canada, and continuing monthly recordings are made to determine the effect of construction on difficult deltaic permafrost. The recent petroleum discoveries and possibilities for pipelines add a new dimension to delta research, and have led to considerable activity directed towards understanding the arctic environment and the possibilities of its disruption through uncontrolled industrial activity.

The Inuvik Research Laboratory, operated by the Northern Science Research Group of the Department of Indian Affairs and Northern Development, is a service facility supporting research and technical programmes in the western Canadian Arctic. The purpose of the laboratory is to stimulate Arctic research among universities, government and industry by providing well-equipped facilities for intensive study, and serving as a base from which extensive field studies can be undertaken. Logistical assistance, working space, technician support and equipment are offered to investigators. All the projects are sponsored by outside agencies, rather than being locally funded.

The laboratory, a new two-storey building, contains low-temperature rooms and special arctic experimental facilities in addition to general laboratories, photographic darkroom, library, offices and seminar rooms. Camping outfits and field camps are maintained for investigator use, while minimal temporary sleeping quarters are available at the laboratory, which is centrally situated in Inuvik with ready access to the waterfront, airport, and surrounding region.

The laboratory staff of six operates the facility and provides technician services to investigators. The staff prepares reports on request and assembles commonly-used data, such as weather records, water-levels, and snow surveys. When an investigator organizes a project, a laboratory technician may carry out the observations, sampling or other activity throughout the year. With this service a considerable amount of arctic research activity is now carried on all the year, where previously it was limited to a few summer months.

The laboratory is open for use by investigators working in all scientific disciplines. All who have support to reach Inuvik may avail themselves of its facilities. This policy is in fact practical, due to the rather expensive air fare between Inuvik and the south, which filters out the casual and unorganized investigators.

Since the laboratory opened in 1963 the utilization has been steadily increased from 115 investigators working 206 man-months on 69 projects in 1964/65 to 250 people working 600 man-months on 200 projects in the year 1971/72. The busiest time of year is in the summer when there are as many as 150 investigators working out of the laboratory, but the number declines to around 30 during the winter months. Whereas some of these research workers use the facilities for a number of years, others stay for only one or two days.

The facilities of the Inuvik Research Laboratory are flexible and service-oriented to handle changes in the type of research supported. No charges are made for the services of the laboratory, which functions to encourage increased research with the expectation of improving conditions and resource utilization in Canada's northern lands through enriched knowledge obtained by sophisticated research.

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